



This photo probably gives you an inkling of how Myshkin, Moscow Dynamo net-minder, felt all through the match against Moscow Spartak. The latter won, 7-6. This victory means that Spartak is now almost equal in points to the Central Army Club.

Photo by Andrei Golovanov

Biathlon spectacular has begun

Over 20 countries will participate in the senior and junior world biathlon championships beginning at Raubicht outside Minsk, Byelorussia, on February 9.

Viktor Mamatov, the 1967 world title holder and Olympic relay winner, and now the new head coach for the USSR side, thinks it will be a very close encounter. The strong favorites are the GDR, led by the Olympic champion Frank Ullrich, 24, who holds nine golds from world championships, five also did extra well at recent World Cup stages in Switzerland, Italy and the FRG.

Still competition is expected from Norway, Finland, as well as from FRG top biathletes Fritz Fischer and Peter Angerer and Frenchman Yvon Mougel,

who finished third in last year's 20 km event.

Our team is a mixture of experience and youth, Mamatov emphasized. Its leaders are the twice Lake Placid gold medalist Anatoly Alyabiev, Leningrad, and the Olympic relay winners Vladimir Barnashov, Omsk, and Vladimir Alkin, Perm.

The championship will wind up on February 14.

AMERICANS LOSE MATCH IN UKRAINE

In the Ukrainian mining city of Donetsk, Soviet boxers won, 5-4, in the third and final match between Soviet and American teams.

MOTOR RACING

The annual international "Russian Winter" rally, the first of the seven stages involved in the Friendship Cup competition among the socialist countries, will set out on February 13 from the Moscow Hippodrome. Following the speed races held at the Hippodrome and the Tushino airfield the next stage will be on country and woodland roads in the Moscow and Yaroslavl regions. The addition element of risk included in the rally is the fact that the sports cars are prohibited from using antiskid devices or spikes.

Top racers from Bulgaria, Hungary, the GDR, Poland, Romania and Czechoslovakia are expected to take part. The USSR are using these runs to nominate their ultimate national side.

Vladimir DANILCHEV, Master of Sport, USSR team coach



Europe's top dancing pairs: Jayne Torvill and Christopher Dean, Great Britain, (centre), Natalya Bostemyanova and Andrei Bukin, USSR, second place, and Irina Moiseyeva and Andrei Minenkov, also USSR, third place.

Photo AP-TASS

Stenmark gets his way

Celebrated Ingemar Stenmark took the last of the eight golds at the Alpine skiing world championships at Schladming, Austria, dashing in dazzling style the special slalom preciptious stiff course with dizzying turns in 1:52.60.

MOSCOW OLYMPICS IS A MODEL

At a recent Los Angeles session of the IOC Executive Board which reviewed preparation for the Summer Olympic Games in Los Angeles, TASS correspondents had the opportunity to meet Peter Ueberroth, President of the 1984 Olympic Games Organizing Committee.

Q: The Olympic Charter states that the goal of the Olympic movement is to educate young people through sport in the spirit of mutual understanding and friendship, promoting peace and universal dissemination of Olympic principles for building up goodwill among peoples. What is your committee doing to put these ideals into practice?

A: We will try to organize well only one thing: a competition for sportsmen around the world. We are no political organization, we are concerned only with sport. We will try to well organize the Games, which were so wonderfully staged in Moscow. Quite possibly, they were the best Games in history.

Q: Are you using the experience of the past Olympics, notably in Moscow, and in what areas?

A: Yes, we are. The Moscow Games were perfectly organized and we won't be able to hold our Games as well in many aspects. Still the Moscow Olympics is a model for many organizing committees, ours included.

1:48.48 sec. Significantly enough, half of the field failed to make it home. Second-placed Bojan Krizal, Yugoslavia, came second in 1:48.50, his second silver championship award. The best Soviet finisher Vladimir Andreyev was tenth in 1:52.60.

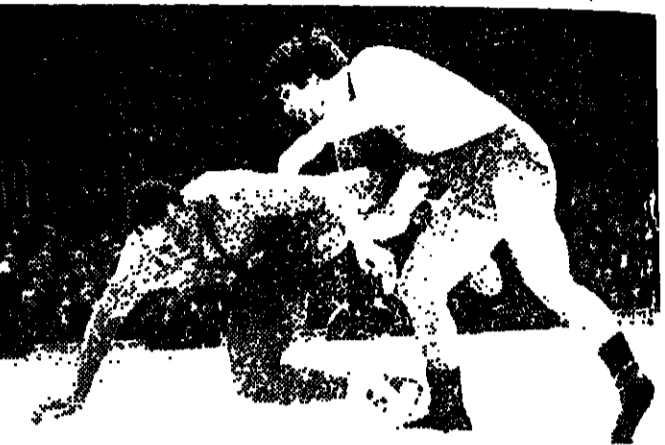
Austrian Harti Weirather won the men's downhill clocking 1:55.10, the only top award for Austria, which was enough for the Austrian press to proclaim only something short of national mourning.

The championship proved a spectacular triumph for Swede Erik Hovde, 19, who won the slalom gold to her 45 awards in the giant slalom combination.

The men's combination was captured by Michel Vintz from France.

One feature of the event is its success for Canada and the USA, who amassed two gold and several other awards—42 years ago they failed to win even a single medal.

Boris BUKHOVITS



TOUGH LUCK IN SEMIFINALS

The Soviet tennis players lost, 0-3, to the FRG national team in the semifinal match of the European winter tennis championship or the Royal Cup series, held in the West German city of Dortmund.

This means that the FRG team will meet the winners of the Sweden-Czechoslovakia match in the finals.

It does not upset us that the Russians have won all three series — they have been an excellent training session for us in view of the August world wrestling championship due to Canada, said Steve Ivanov, member of the Bureau of the International Amateur Wrestling Federation, and head of the American free wrestling team which recently visited the USSR.

Photo by Sergei Proskov

Back home without gold

The 74th European figure skating championship which took place at the Chaux-de-Fonds skating rink, in Lyons, ended with a skating extravaganza. It is pleasant to be able to report that the Soviet skaters walked away with most of the applause in this event. Their first class performance here somewhat mitigated their overall disappointing results: for the first time in 18 championships they have returned home minus the gold awards.

Yelena Vodoretzova, 18, from Moscow, did her utmost and won the third place all-round in the women's singles, after a three-year absence. She gave way only to Claudia Kristofles-Binder, the current champion, and to second-placed Katharina Witt, GDR.

Our dancing pairs were not that bad, winning all places from the second to fourth. In this event are rather conservative and both spectators and journalists were at first predicting victory to Jayne Torvill and Christopher Dean from Great Britain. This was the second European championship in a row won by the British pair. The silver went to Natalya Bostemyanova and Andrei Bukin, winners of the national title, and the "Molodtziy Novosti" sponsored international tournament.

The bronze medals went to last year's winners Igor Bobit and by the figure skating pair of Irina Vorobyova and Igor Lisovsky are naturally a bit back.

By air — from Moscow

Destination Venus

The Soviet Venera-13 and Venera-14 probes are nearing their destination. On February 10 the first craft was 7,700,000 kilometres from Venus, and the latter, 8,500,000 kilometres from the target. They are scheduled to reach the vicinity of the planet on March 1 and 5 respectively. The complex systems aboard the probes process the emergency and reproduction of charged

particle flows of solar and galactic origin, and determine the structure of the interplanetary magnetic field.

The probes are carrying Soviet and French designed instruments registering space and solar bursts of gamma radiation. Over 20 such phenomena have been recorded so far, ten of them registered simultaneously by the two probes.

INFORMATION

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Soviet proposals at Geneva

Moscow (TASS). Seeking to give a much-needed impetus to the negotiations on medium-range nuclear weapons in Europe, the USSR has suggested that all efforts now be concentrated on producing, over a short period of time, a joint document to define the following fundamentals of a future agreement:

— In keeping with the principle of parity and equal security, the agreement should apply to and cover all nuclear medium-range weapons which can be fired within a combat range of 1,000 and more km and deployed in Europe and in adjoining waters, or intended for use in Europe;

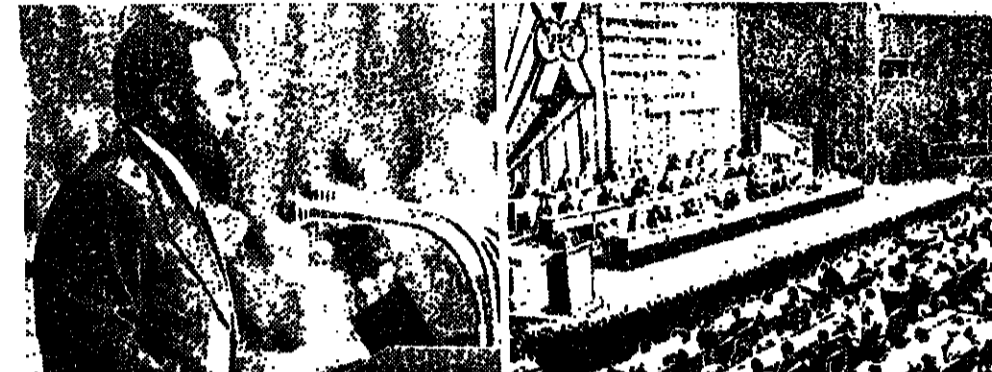
— In order to achieve maximum reduction in the levels of the above weapons both on the part of NATO and of the Soviet Union, the agreement must envisage a reduction in their present numbers of about one thousand to 300 each by the end of 1990, with the establishment of an intermediate level of 600 units on each side by the end of 1985;

— Both sides will have the right to decide which weapons they will reduce or, within the agreed numbers at their discretion, replace or modernize, the frames to be specified additionally;

— destruction would be the main method used for reducing the numbers of medium-range missiles; this does not exclude the possibility that some of them be withdrawn beyond the mutually agreed borders;

— provisions are to be drawn up to provide adequate control over the implementation by both sides of their commitments under the agreement;

(Continued on page 3)



Fidel Castro speaks at the opening ceremony of the 10th WFTU Congress. The congress hall.

FOR PEACE, DEMOCRACY AND SOCIAL PROGRESS

Havana. Delegates from more than 350 national and international trade union centres, representing 260 million working people from all over the world, have gathered together in the Cuban capital for the 10th World Trade Union Congress. The message of greetings sent to the congress by Leonid Brezhnev emphasized that "the most impor-

tant task of trade unions is to protect the rights of human beings. The most important of these is the right to live in peace". This approach met with a highly positive response from any delegates.

To safeguard the interests of the working people and of the nations in the present conditions amounts to defending their right

to live, work, bread and to a decent existence, Fidel Castro said in his address. The present moment knows no more urgent or demanding task than the fight for peace and the preservation of mankind from a nuclear holocaust, he stressed. This fight is inseparable from developmental

(Continued on page 2)

Karpov gets his eighth Oscar

Third world chess titlist Anatoly Karpov has captured another Oscar, the coveted prize for the player of the year awarded by the International Association of Chess Press.

Karpov got his first Oscar back in 1973, and now has eight such trophies under his belt. This year the Barcelona-based association received suggestions from 118 sports writers in 37 countries. Karpov polled 1,253 points, with Holland's Jan Timman trailing him with 1,117.

Ex-world champion Mikhail Tal picked up 922 points, and Garry Kasparov, also of the USSR, 740. Another two Soviet Grandmasters who made the top ten, Vitaly Tashkovsky and Alexander Beliavsky, came seventh and ninth with 452 and 394 points respectively.

The award is a silver statuette of a woman with an umbrella, the emblem of Barcelona.

Round the Soviet Union

● THE NEW PORK FACTORY, NAMED "BERGEL" AND SITUATED NEAR TASHKENT, WILL ANNUALLY PRODUCE 6,000 TONNES OF PORK. Six centres have been established in Uzbekistan and although the number is rapidly increasing they contain at the moment 300,000 pigs.

● EVERYTHING ONE CAN FIND IN THE CARPATHIANS CAN BE BOUGHT IN THE GIFTS OF NATURE SHOP IN UZHGOROD. The shop has been opened recently and offers game, mountain honey, dried and preserved mushrooms, fruit jellies, juice and jam. Souvenirs are also on sale.

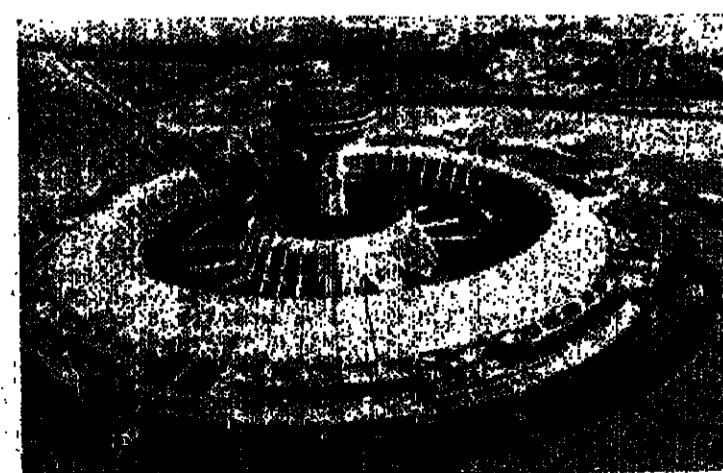
NEW AIR TERMINAL FOR YEREVAN

A new air terminal has been put into service at Yerevan, the capital of Armenia. At present air services extend from Yerevan to 60 Soviet towns. The old air terminal failed to handle the ever increasing air traffic: between 1965 and 1980, for instance, departures from Yerevan grew four times. The new terminal will handle 2,100 passengers an hour, or 8,000,000 a year, instead of 1,500,000—the capacity of the old terminal.

Close to the new facility are the ruins of the Zvartnots Cathedral which was built in the early 7th century and later struck by an earthquake.

Architect Arur Tarkhanian, who worked for the project, stated that the idea was to add a historic flavour to the air terminal project.

Among many innovative approaches employed was the partitioning of the terminal into seven independent mini-terminals, each of them capable of handling 300 passengers an hour and "boasting" of two telescopic gangways. The terminal facilities can service up to 14 planes at a time.



In building the airport specialists from Armenia, Moscow, Leningrad, Kiev, Riga, Tallinn and other cities joined efforts with firms from Hungary, Poland, France, West Germany and Switzerland.

Minister of Civil Aviation, said the latest technology incorporated into the terminal will considerably expand Armenia's "domestic" and "international" air services.

Alexander BUTANKIN

ATTENTION, SUBSCRIBERS ABROAD.

DEAR READERS,

"MN Information" comes out on Tuesdays and Saturdays, and offers in brief the latest information on events in the USSR and in the world reported by TASS and foreign news agencies. Nothing short of the material carried in the editions of both "Moscow News" and "MN Information" gives you a full idea of life in the Soviet Union for the week.

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Reports from El Salvador indicate that the Farabundo Martí National Liberation Front units are keeping up the scale of combat operations against the junta troops.

Telephone: UPI-TASS

Yassir Arafat: MOUNTING THREAT TO LEBANON

Beirut, PLO leader Y. Arafat gave a warning concerning Israeli aggression against the Lebanese and Palestinian peoples. Reports alleging that Israel has ceased its large-scale plans to act against Lebanon, he told a regional conference of the integrated alliance of the Palestinian students, is purely propaganda. The situation in the south of Lebanon, he claimed, is still extremely volatile, and the Israeli military preparations in the region captured by Haddad separatists

reveal the real existence of threats from Tel Aviv. Statements by American officials support this fact and prove that Israel has made no attempt to abandon its plans to liquidate the Palestinian resistance movement and the Lebanese national patriotic forces in the south of the country. Israel has only made minor changes in the timing and direction of the aggression, and regarding the forces involved in the campaign.

BRITISH SCIENTIST WARNS OF THE CHEMICAL WARFARE DANGERS

London. The programme for the large-scale production of new chemical agents and the US administration's intention to set aside \$10 million dollars for this purpose in 1983 will result in a massive escalation in the manufacture of advanced types of mass destruction weapons, states Professor Steven Rose, a prominent British scientist. Speaking at a parliamentary press conference, he noted that the use of such weapons may set off irreversible biochemical changes which will endanger life on earth.

A pamphlet, "The threat of nuclear chemical weapons" presented to the press conference, claims that the new binary chemical shells are classified as offensive weapons and that they have been designed for use in Europe. Washington which has already indicated it is prepared to wage a limited nuclear war in Europe will not resist from using chemical agents in such a war, stresses the pamphlet.

It also points out that the Soviet Union neither produces nor stockpiles chemical weapons.

FOR PEACE, DEMOCRACY AND SOCIAL PROGRESS

(Continued from page 1)

problems, from the efforts of nations and working people to achieve more just and equitable living conditions.

For us working people the fight for peace has two dimensions, said Ibrahim Zakaria, Acting Secretary-General of the World Federation of Trade Unions. We are fighting for peace because along with all other sections of society we are loath to die in a nuclear catastrophe. We also stand for peace because preparations for war and the arms race are depriving us of our daily bread. The fight for peace and disarmament goes hand in hand with our fight

against the ever growing capitalist crisis. Alexei Shibaev, head of the Soviet delegation and Chairman of the All-Union Central Council of 77 Trade Unions, pointed out that the working people and their trade unions represent a real force which is both able and must speak out forcibly against the war menace.

We support, he said, the WFTU drive towards unity in the world trade union movement. Our congress provides yet additional testimony of the working people's resolve to see the elements of trust and cooperation achieved by the trade unions last into the 80s despite the complex current situation.



Good for you, you sure are growing fast.

Drawing by N. Scherbakov

JAPANESE GOVERNMENT PLAYS BALL WITH USA

Tokyo. The Japanese government will supply the USA with up-to-date military technologies, including those for the aircraft, electronics and laser industries, "Mainichi" reports.

Following the election of the Reagan administration the Pentagon markedly increased its pressure on Japan demanding access to the latest Japanese scientific and technological achievements of military significance. After the demand was reviewed by a special commis-

sion comprised of representatives from Ministry of Foreign Affairs, the Ministry of International Trade and Industry and the National Defence Agency, the cabinet of Z. Suzuki decided

Round the Soviet Union

● THE SOVIET RESEARCH VESSEL "AKADEMIK VERNADSKY", NOW IN THE CARIBBEAN, HAS EMBARKED ON AN INTERNATIONAL EXPERIMENT PREPARED BY THE UNESCO OCEANOGRAPHIC COMMISSION. It will study oceanic and atmospheric interactions, the manner in which hurricanes and cyclones are formed, and the appearance of microorganisms capable of absorbing oil in the ocean. Oceanologists from Cuba, Venezuela and Costa Rica are also on board.

● AN ARCTIC NATURE MUSEUM HAS BEEN ESTABLISHED IN IGARKA, A SOVIET TOWN BEYOND THE ARCTIC CIRCLE. The museum walls are made from ice, while its exhibition area is situated deep underground. On display are plants from the tundra, an area of permafrost, as well as weeds collected off the Arctic Ocean coast and placed under plates of transparent ice.

● A HELICOPTER LIFTED A 10-METRE SCULPTURE ENTITLED "MAN AND SUN" TO ITS PLACE ON TOP OF A 80 M STELA MARKING THE ENTRANCE TO TBILISI, THE CAPITAL OF SOVIET GEORGIA. Its designer Zurab Tsereteli is known in many countries. He said in a recent interview that the image of a youth bearing a sun symbolizes a happy future for mankind, goodness, hospitality and peace. He dedicated the work to the 60th anniversary of the USSR to be celebrated this year.

● IN THE SOVIET FAR EAST, PRODUCTION HAS STARTED UPON SMALL LIGHTERS designed to transport cargoes to remote areas along the Arctic and Pacific coasts. The use of lighters saves both time and manpower.

● A NEW WATER SUPPLYING STATION HAS GONE INTO OPERATION IN VENTSPILS, A BIG PORT ON THE BALTIC SEA. Local flats and factories are now provided with water from a lake and Ventspils has twice as much water as before.

MINSK UNIVERSITY

Minsk State University is the oldest in Byelorussia. Its sixty-year history is linked to the name of the man who founded the Soviet state—in 1919 Vladimir Lenin signed a decree on the establishment of a university in Minsk, the first higher educational establishment in Byelorussia.

In those 60 years the university has trained and educated more than 30 thousand specialists in different branches of science and technology. Today, there are nearly 18 thousand students studying at its 12 departments. They represent the 43 different nationalities inhabiting the Soviet Union and 60 foreign nations.



● Alexei Lyubimov, a first-year student of the history department, in the library. ● A lecture in progress.



The university has its own computer centre. It also boasts of a botanical gardens, as well as history, zoology, and geology-mineralogy museums, all of whose exhibits have been put together by the students. The university library has more than 900 thousand books.

Every second student is a member of the university's student science society. Much of their work is done for industry.

Graduates from Minsk University find employment all over our country. Apart from Byelorussia, they can be found in the Soviet Far East, in the North and in Central Asia.

'SHELF-1' SETS OUT IN SEARCH OF FUEL

The floating drilling platform "Shelf-1", has set out on its first voyage, in the Caspian. Its crew will drill their first 4,500 m deep well 90 kilometres off Baku.

"Shelf-1" is the first in a series of half-submerged drilling rigs intended to loosen offshore oil extraction. These rigs can drill wells reaching down to 6,000 m at depths of up to 200 metres. Rather than being supported by huge telescopic steel legs resting on the seabed, "Shelf-1" is submerged 14 metres under the surface and kept afloat by pontoons and anchors.

Drilling from moveable platforms costs less and is faster than drilling from stationary platforms. It also saves metal.

NEW HARBOUR FOR TALLINN

In the Estonian capital of Tallinn work has begun on a new harbour, which will eventually lead to a new seaport. Surveyors have already started to lay out the harbour of the new port which is thought, will take five years to build.

Once finished, it will be a serious rival to Tallinn harbour well known to seamen all over the world. The new port will be able to accommodate ocean-going ships and will be protected from heavy seas by dunes. It will increase the handling capacity of port facilities in Tallinn by several times.

Power bridge to Urengoi

The Urengoi, one of the world's largest gas fields in Western Siberia, is receiving electricity via a 600 km power line linked to the unified national grid. The construction crews have worked under the most demanding conditions, transporting the pipes as far as the Polar Circle and marshes, dense taiga and the permafrost.

and promising experiments are in progress with shellfish...

Underwater reserves in which industrial fishing and hunting will be forbidden will serve to repopulate surrounding areas with fish and plants. Unique sea parks are on the way — the first experiments in this direction having already been carried out in our country, in Japan and the United States.

HOME COMFORT NORTHERN STYLE

A characteristic feature in the present-day life of the peoples of the North is their switch-over from a nomadic to settled way of life, writes author Vladimir Sangi, in the SMENNA magazine. According to the latest all-Union census, there are 158 thousand people belonging to 26 ethnic groups (Sangi himself is a Nivkh) living in the North. Out of this total more than 18 thousand families are already leading a settled life.

While in many regions this transition has already been completed, in the Tyumen and Arkhangelsk regions as in the Khabarovsk and Krasnoyarsk territories and the Yakut SSR the process is still in progress. Former nomads now live in comfortable flats with all modern conveniences.

Yet, those who build houses for these peoples should bear in mind their traditions and way of life. Sangi emphasizes. One should not forget that this switch-over has taken place within the lifetime of one or two generations. Though it wouldn't go as far as to say that exact copies should be made in stone or wood of the traditional houses, perhaps some of its features might be preserved. Sangi suggests. Multifaceted houses, for instance, should be avoided. Each family should have a house of its own plus auxiliary outbuildings for the storage of food and hunting and fishing gear. These could also be used to house the dogs for which, as yet, there is no adequate cross-country vehicle replacement in the tundra.

yet, there is no adequate cross-country vehicle replacement in the tundra.

CRITICAL WORK SITUATIONS — GOOD TRAINING

It is my belief that students and young professional people should be placed more often in "critical" work situations—to which there is only one solution — action and quick action at that, writes Academician Alexander Samarsky, Department Head of the Institute for Applied Mathematics, USSR Academy of Sciences, in PRAYDA.

Paced by such situation a young man is forced to show inventiveness, initiative, and to concentrate entirely on the task at hand. In my own department I often set my young colleagues problems of this type. At first they weren't sure how to set about them, though they knew they had to be solved. It is important moreover that related questions are dealt with at once by more than one person. This stimulates mutual self-enrichment and speeds up research work I have often seen with my own eyes how competition between two scientists produces results three to four times quicker than if they had been working on their own.

CANDIDNESS IN ART

What do you think is the main purpose of an artist—a SOVIETSKAYA KULTURA correspondent asked the Bolshoi singer, Alexander Vedernikov.

I am a singer, and naturally I primarily want to make people happy to share in their happiness. This is still not enough, he said. Rodin used to say that art is a wonderful lesson in candour. Truth, beauty and simplicity placed in the service of people is our task and this forms the true purpose of an artist.

Places to visit



'A Thousand Years of Russia' in Novgorod

For the past hundred years and more a bronze monument called "A Thousand Years of Russia" has stood in the centre of the Kremlin, in the old Russian town of Novgorod. It is the work of sculptor Mikhail Mikeshin.

The figures of the monument symbolize the history of Russia at various stages of its development. Among them are statesmen and representatives from the world of literature, the arts and education. The monument suffered severe damage during the Great Patriotic War of 1941-45 but was subsequently restored by Soviet masters.

Science and technology

GAMMA-RAYS VS MICROORGANISMS

A suggestion to expose pages of rare books, manuscripts, and artworks to gamma-rays was presented to restorers by scientists from the Zabolotny Institute of Microbiology and Virology at the Ukrainian Academy of Sciences.

Such treatment reliably protects objects from biological corrosion caused by microorganisms. Minute fungi have damaged invaluable old masterpieces which had survived the ravages of wars, fires, floods and every other conceivable disaster. The fungi feed on the organic matter formed on the canvas, the paper, and in the pigments. The present methods of control are of little use as the fungi can adapt to the strongest antiseptic preparations. However, this new method has proved effective and is now being applied to art treasures which will decorate the museums of Kiev to mark this year the city's 1,500th anniversary.

A JOINT EFFORT BY MEDICAL AND CIVIL ENGINEERS

Medical engineers working on the development of a heart valve were greatly assisted by young researchers from Moscow's Civil Engineering Institute. The reason for this was that the research work dealing with hydrodynamics shared much in common with the studies undertaken by cardiovascular engineers.

It was recently discovered that certain valves form in the blood flow which passes through the heart valves. This fact has enabled the researchers to find a new solution to the problem of making an artificial heart valve. Civil engineers have already designed its simulation model.

BOILING WATER AS METAL HARDENER

Hardly anyone would have guessed that boiling water can be used to modify the physical properties of metal surfaces. This idea was put forward for the first time and practically tested by scientists from the Riga Polytechnical Institute.

Their research has shown that every part of the metal surface on which at boiling point a steam bubble appears, immediately cools down by several degrees. Continuous differences in temperature during hardening and even thousands of a second being about thermal stresses and cause shifts at the atomic and molecular levels in metal structure. This increases the strength of a thin layer on the surface which thus can be reinforced by 30 to 40 per cent, or enough to raise the wear and tear resistance of machine parts and assemblies.

If boiling water is replaced by certain chemical compounds, it becomes possible to produce a low-hardened layer, which prevents the metal from cracking. In many ways, the effect depends on choice of the liquid and on the length of the process.

MINI-MANUSCRIPT

Standing next to the huge books on the shelves of the National Library in Dushanbe, capital of the Tajik Republic, the volume of Hafiz Shirazi's poetry recently acquired by the library looks like a miniature. It contains nearly 500 manuscript and gazals written in minuscule Arabic script. Specialists believe that the miniature decorated collection was compiled in the 15th century, a hundred years after the poet's death.

Much interest was aroused by unknowns, the line couplets, in widespread use in classical Oriental poetry. Their authors drew their subjects from the gazals of their great predecessors. Hafiz Shirazi who had an outstanding knowledge of the poetry of Ferdusi, Khayyam and Saadi wrote with pleasure in the genre following closely on previous tradition.

The store-room of Oriental manuscripts at the library contains 35 manuscripts bearing examples of Hafiz's poetry. They are of particular value because they were copied at different times by different scribes, each of whom introduced his own "corrections" and additions, reflecting the special features of the time and the scribe's outlook. In this way one is able to trace the development of the language and style and even of the culture of the peoples of the East.

A NIGHT OUT IN ESTONIA

A copper coffee pot hangs over the cafe's door leading into a medieval Neitsitorn, or Maiden's Tower. It invites you to take a cup of fragrant coffee.

Having passed a high threshold and opened a forged door, you enter into a world of fairy tale. Outlandish lanterns hang from

the walls, the high backed chairs are massive, enhancing the low tables made from oak. A steep staircase leads down into the cellar, where the 2-metre thick walls are covered with Estonian artwork.

No matter where you are in Tallinn you will always find a cafe, whether in Pirita, or the narrow medieval Harju Street, or inside the new TV tower, or at Mustamäe, a recent housing estate. The suburb is especially

noted for its cafe at Rannamois.

The Estonian eating houses are famous for their unique features. In Tallinn, for example, they make very fine tasty pies. In the Gnom there is a special room devoted to cookies and pastries. Pegasus offers the attractions of a small art gallery. While visiting the Moscow and Tallinn cafes one is to join into heated discussions on the age-old subject of art.

OF INTEREST

A METEOROLOGICAL

LIZARD

Staff members of a remote weather station in the Karakum Desert have tamed a dragon lizard who happens to be highly sensitive to weather changes.

At first, the lizard made its home not far from the station. The meteorologists began by leaving out food, and gradually the lizard grew accustomed to people and allowed itself to be caressed and handled. That this "well-behaved" reptile was close to man was very useful for the latter, as lizards of this type usually feed on cobras and other poisonous snakes.

The weathermen also discovered that whenever bad weather was forecast, the lizard changed its behaviour. One sunny day, rare in those parts during winter, the weatherman did not recognize their friend who snapped its jaws and behaved rather ferociously. The reason for this aggressive behaviour became clear in an hour when the sky turned black and a heavy wind storm broke out.

STUDENT DEFEATS PROFESSORS



Maya Chikurdzhina (in the middle photo), a student at the Tbilisi Medical Institute, has won 18 out of 24 chess games she played simultaneously with her professors and teachers. Six professors drew. Not only is she the world chess champion among women, but she also managed during the winter ordinary session to pass all her exams with flying colours.

VIEWPOINT

Soviet power industry: prospects for development

Pavel FALALEYEV, First Deputy Minister of the Power Industry and Electrification of the USSR

The Soviet economy is based on the country's fuel and energy resources. It possesses half of all the known coal reserves in the world. It also has immense resources of natural gas and plentiful reserves of oil.

Nevertheless in the USSR we are working to improve patterns in fuel and energy generation and consumption by lowering the share of oil used as fuel, replacing it with gas and coal, and by developing nuclear energy. We are also looking for basically new sources of energy and are considering selling up a power industry making use of thermonuclear fusion.

In the 11th five-year plan of 1961-65 the growth in generation of electricity will be obtained mainly through the use of nuclear fuel, hydroelectric power and of coal in the eastern areas of the country. In the current five-year plan nuclear and hydroelectric power projects will be responsible for 70 per cent of the increase in the production of electricity, whereas the equivalent figure in 1970-75 was only 10 per cent.

Over the next five years we plan to introduce new nuclear power generating facilities of between 73 and 24 thousand million kilowatts and to produce nearly 220 thousand million kilowatt-hours of electricity at nuclear stations, or 11 per cent of the overall Soviet production of electricity.

The development of the nuclear power industry is both highly advisable and economically feasible in the European part of the Soviet Union.

In the development of the hydroelectric power industry the main stress is put on the construction of electric power stations in Siberia, the Far East, and Central Asia—areas rich in hydroelectric resources. Here we are building major projects like the 8.4 million kilowatt Sayano-Shushenskaya HEP on the Yenisei River.

The Soviet power industry will still mainly be based on thermal condensation stations producing nearly 80 per cent of all electricity in the USSR.

Whereas until recently development in thermoelectric power generation was mostly concentrated in the European USSR, the overwhelming majority of the new thermal power stations are to be built in Kazakhstan, Siberia and in the Soviet Far East.

The development has begun of the rich coal reserves of the Ekibastuz coal field in Northern Kazakhstan and of the Kansk-Achinsk coal field in Eastern Siberia. Stations built here are rated at 4 and 6.4 million kilowatts.

Stations running on natural gas are to be built in Western Siberia. The overall potential of the new thermal electric power stations is to be between 70 and 80 million kilowatts.

Increased use is to be made of alternative sources of energy like solar geothermal and wind energy. The first solar station rated at five thousand kilowatts is being built in the Crimea, while the Molokanyska geothermal station is under construction in Kamchatka.

Like other countries, the USSR is working to harness considerable thermonuclear fusion. With the creation of industrial thermonuclear reactors energy resources may become to all intents and purposes inexhaustible.

Theatre, Cinema and TV Stars

Edyta PIECHA



The year is 1965. An amateur vocal ensemble is formed at the Leningrad Conservatoire, its heart and soul is a slim philosophy student from Leningrad University—Edyta Piecha. Her features are still somewhat forced, she is angular and doesn't know what to do with her hands, yet one discerns in her an original talent, a new star of the world of song. Her voice is also unusual, its intonable timbre and light emphatic lines linger on in the memory.

Recently Edyta Piecha performed a new programme, "Not a Day Without Song", at the Rossiya Concert Hall, in Moscow. Commemorating her 25 years of work on the stage in its own way, it represented a summing up of her career. A lot had happened during these years, but above all they consisted of work, constant painstaking work on the voice, plasticity of movement, gestures and even mime. A search for repertoire, the perfection of her own, individual manner of presentation, her realization as an actress made up the rest.

Dramatic art had, incidentally, long attracted the singer. She had successfully taken part in several films, while her work on the stage was free from the usual "vaudeville" act. Possessing to a significant degree the gift of metamorphosis, Edyta is able to feel, understand and "live" each song. Everything she sings deals with human fate; often a confession, it is always a heart-to-heart talk with the audience.

The winner of many international festivals and competitions, Edyta has sung a lot abroad—appearing twice at the famous Olympia, in Paris. "I have never gone in for fashionable songs," says Edyta. "In the past my work reflected my emotional state—it still does so today. As I grew up, so my songs 'grew up' alongside me. They have travelled a long way from melodies expressing the ecstasies of a young girl to sensitive songs and ballads. I sing both of first love and of wear, of selfishness and the cost of happiness, of human adversity and of the goodness in the human heart. My songs reflect the thoughts and problems of people of my age, my generation."

Alexander KHARKOV

Opera festival to honour a great singer

The first opera festival honouring Pyotr Chaliapin has opened in Kazan, the native city of this great Russian singer.

The participants include opera soloists and conductors from the musical theatres of Moscow, Leningrad, and from Czechoslovakia to name just a few. The festival is being held in the Tatar Opera and Ballet Theatre named after Miss Dzhahit. It includes such operas as "Boris Godunov", "Faust", "Eugene Onegin", "Prince Igor", "Rusalka", and "The Barber of Seville".

'ORPHEUS' MAKES A COMEBACK

Orpheus, a son of the Muse Calliope, did more than fascinate people and gods by his voice. He inspired Yakov Kavzashvili, a writer famous at the end of the 18th century, and composer Yevstigney Pomin whose music was admired by his discerning tutors at the Philharmonic Academy in Bologna. Now Pomin's long-forgotten "Orpheus" has been revived by the Barocco ensemble for chamber music in Yaroslavl.

The ensemble gives its concerts in an old mansion on the banks of the Volga, which is hung with a rich collection of old masters as well as with modern paintings. The public's verdict is unanimous: the concert representing a trip into musical history is a success.

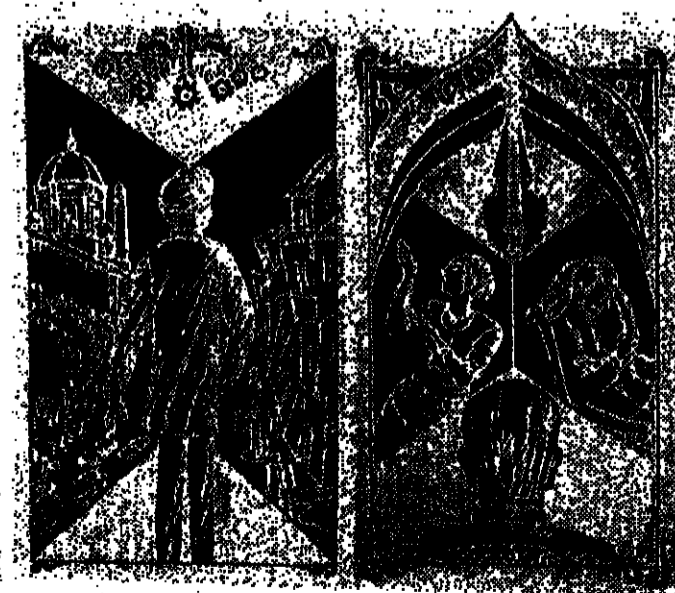
"We have toured Italy, Austria, the FRG, Japan, and other countries," says Igor Popkov, director of the ensemble. "We play Handel, Bach, and Vivaldi. Most popular of all, however, is music by Russian composers who are little known abroad. Everyone has heard of Glazunov, Tchaikovsky, and Shostakovich. But for most the works of Dmitry Borovinsky, Glebov, Degtyarev, and Alexander Plekhanov were a real discovery."

FACTS AND EVENTS

Concerts. A solo concert by the Bolshoi singer, Yevgeny Nesterenko, featuring arias from operas by Glinka, Tchaikovsky and Mussorgsky performed at the Konzerthaus, a major concert hall in Vienna, was met with resounding success.

Theatres. The entire history of Russia's oldest professional theatre, from its founding by Fyodor Volkov to the present day, was traced in the play "Jubilee or 225 Years in the Life of a Theatre" premiered recently by the Pushkin Drama Theatre in Leningrad.

Cinema. Recently a week-long festival of Soviet films was shown in Mexico's largest movie-theatres. It was sponsored by Sovexportfilm and the Mexican Peliculas Mexicanas film company. Between February and April Soviet films will be shown in 18 Mexican states.



The Khudozhnitsennaya Literature Publishers will issue the novel, "Dark Closed Rooms" by the Indian writer Mohan Rakech, with illustrations by the Soviet artist Leonid Ladin.

Exhibitions. The drawings of Japanese children from 3 to 17 years old are on view at the Ryazan Museum of Arts. The 200 works on show provide a direct and lively picture of the nature, traditions and people of the land of the rising sun.

Guest performances. A Soviet circus group is now performing in Vienna, presenting a repertoire comprised of various numbers, including acts by elephants, tigers and bears. They are also scheduled to perform in Graz and Innsbruck, and then will tour the FRG. During the next three months they plan to mount nearly 90 shows.

Books. The Soviet Composer Publishers are putting the finishing touches to a four-volume edition devoted to Dmitry Shostakovich's life and work. The dialogue from this series called "Shostakovich's Youth" and "Shostakovich in the Great Patriotic War" was released in 1975 and 1977. The last book examines the composer's post-war work.

BYELORUSSIAN ACTORS VISIT MOLDAVIA

The Days of Byelorussian opera and ballet art dedicated to the 60th anniversary of the formation of the USSR are taking place in Moldova.

Byelorussian performers will perform the leading roles in the productions created by the Moldavian Opera and Ballet Theatre. The programme of this festival includes a display of pre-classical ballet and a concert of friendship between actors from the two republics.

The festival marks the degree of contact that is shared between the actors of the two constituent republics. Soloists from the Moldavian opera have on many occasions performed in operas and youth festivals in Minsk, the capital of Byelorussia.

The exhibition reflects many promising trends in the development of equipment, instruments and control technology intended for pharmaceutical and chemical processes and research laboratories.

Musicians' dedication to Kiev

"The Song of Kiev" by the Ukrainian composer Alexander Bilash won first prize in the Republican song contest dedicated to the forthcoming 1,500th anniversary of the Ukrainian capital, Kiev.

To mark the occasion this spring, the Ukrainian musicians have compiled a series of compositions in the most diverse genres.

Lithuania is treated to a violinist's talent

Lithuanian classical music enthusiasts recently flocked to concerts by Leon Spterer, the first violinist in the West Berlin Philharmonic Orchestra, who played pieces from Schubert, Schumann, Stravinsky, Ravel and Kreisler.

Leon Spterer holds awards from international competitions in Buenos Aires, London and

Darmstadt, and his solo concerts were a resounding success in America, Japan, India, Romania and many other countries.

He is on the jury of the Zurich and Geneva international competitions. Leon Spterer is pictured here among violinists from the Vilnius Symphony Orchestra.



WHAT'S ON?

February 13-15

THEATRES

Kremles Palace of Congresses (Kremlin). 13 (mat)—Concert by the Soviet Army Alexandrov Song and Dance Ensemble, 14 (eve), 15 — Concerts by the Igor Molodtsov Folk Dance Ensemble of the USSR, Bolshoi Theatre (Moscow): 13 (eve)—Slogimsky "Marius" (ballet); 14 (mat)—Hartel, "Vain Precautions" (ballet).

Bolshoi Theatre (Sverdlov Sq.). 13 (eve)—Rimsky-Korsakov, "Sadko" (opera); 14 (mat)—Dargomyzhsky, "The Stone Guest" (opera).

Shostakovich and Nemirovich-Danchenko Musical Theatre (13 Sovetskaya St.). 13 — Strauss, "Der Rosenkavalier" (opera); 14 (mat)—Vainberg, "The Song of the Nightingale" (ballet); 15 (eve)—Shostakovich, "The Lady of the Camellias" (opera); 16 (mat)—Shostakovich, "The Lady of the Camellias" (opera).

FILMS

A Lift to the Scaffold (France).

Involving two complex murders.

Cinema: "Leningrad" (the Leningradskoye Highway, Metro Sokol).

Facts of the Day Goes W (a two-part production of the film Studio).

This film, based on a novel "Safety Handling" by Yuri Skop, represents an investigation into the moral involvement in business relations.

Cinema: "Otkryt" (Otkrytinsky Prospekt), Metro Arkadyevskaya.

EXHIBITIONS

Exhibition Hall, Society for the Protection of Historical and Cultural Monuments (the Lenin St.). Exhibition of paintings and drawings by Moscow architect Ya. Ovsyannikova and A. A. Melnikova. Daily, except Wednesdays, 10 a.m. to 7 p.m. Metro Prospekt Revolutii.

BUSINESS

MEDICAL TECHNOLOGY ON SHOW

Pavilion No. 5 of the Sokolniki exhibition area is now housing the second international exhibition, Pharmindustry-82, devoted to the equipment for the manufacture of medicine. It has drawn over 120 companies and organizations from Austria, Great Britain, the GDR, West Germany, India, Italy, the USA, the Netherlands, Finland, France, Switzerland, Sweden, Yugoslavia and Japan.

The exhibition reflects many promising trends in the development of equipment, instruments and control technology intended for pharmaceutical and chemical processes and research laboratories.

This event will hopefully encourage further development of the Soviet pharmaceutical industry, especially in view of the demanding tasks which it faces. It is expected that the industry



Siddhartha Bose M.D., Vice-President of California International Trade Corporation (left), at the show.

Photo by G. Dubrovskiy

will increase its output, based on the fine organic synthesis, by 3.5-4 thousand tonnes a year, or by 40-41 per cent, and will commence the full-scale production of 50 new medical preparations mainly to treat cardiovascular, oncological and psychoneurological ailments.

Flora ABDRAKHITOVA

Optimistic trading outlook

The Norwegian textile, clothing and footwear industries have their ninth display in Moscow, sponsored by Evpocentr. This year's display gathered together 40 Norwegian companies, presenting the broadest range of products ever shown in past years. This is explained by the growing interest of Norwegian businessmen in the Soviet market, says Mette Kongsham, State Secretary of the Royal Norwegian Ministry of Trade and Shipping. The USSR is Norway's biggest trade partner in Eastern Europe.

Raw materials and semi-finished products constitute a large share of the total trade, Mette Kongsham stressed, yet

our trade relations show no signs of stagnation. Much interest has been expressed regarding the delivery of end products and expansion in the range of trading goods. The State Secretary's views fully coincide with that of the Soviet partners. The Soviet Union has always advocated the development of beneficial trade relations with other countries.

Despite overseas sanctions against the USSR, the West European business community has no intentions of curtailing its trade with our country and the very proof of this fact is Norway's promotion activity.

Viktor YEVKIN

SPORTS

SWIMMING

Olympic Swimming Pool (Metro Prospekt Mirn). 13 and 14—Winter national championship. Both days at 10 a.m. (preliminary heats) and 6 p.m. (finals).

Leading foreign and Soviet sportsmen are taking part.

ATHLETICS

Krylatoye Sports Complex (Metro Molodtsovskaya) 13 — National Cup, 11 a.m.

Athletes from the USSR, the GDR and Czechoslovakia take part in the finals.

BASKETBALL

Dynamo Palace of Sport (32 Lavochkina St.). 14 — Moscow Dynamo v Vilnius Statyba, 5 p.m.

This game is the current match in the national championship between men's teams.

bandy between men's teams.

BANDY

Fill Stadium (Metro Bagrationovskaya). 13 and 14 — Moscow Fill v Syktyvkar. Stroll. Both days at noon.

RACING

Hippodrome (22 Begovaya St.). 14—Racing and trotting, 1 p.m.

WEATHER

February 13-15

In Moscow, city and region, it will remain warm in the next three days with little snow. Night temperatures between -8° and -5° and around 0°C in the daytime. Foggy in places, SW and W wind, 3-7 mps.

TRANSPORT HOURS

Metro 6 a.m. to 1 a.m. Fare 5 kopeks. Trams 6 a.m. to 1 a.m. Fare 4 kopeks. Buses 6 a.m. to 1 a.m. Fare 2 kopeks. Taxis 24-hour service, twenty kopeks on the meter to begin plus 30 kopeks per kilometre. Ordering a cab 24-hour service, telephone 225-00-00. Communal cabs (over 40 cabs in the city) 7 a.m. to 9 p.m. Fare 15 kopeks.

Contacts and contracts

© The working group on the power industry and electrification of the Soviet-Austrian joint commission on economic and scientific cooperation has signed the protocol of its first constituent meeting. Being part of the USSR-Austria long-range economic and technological cooperation programme for 1981-90, it envisages power exchanges and wider research and development links.

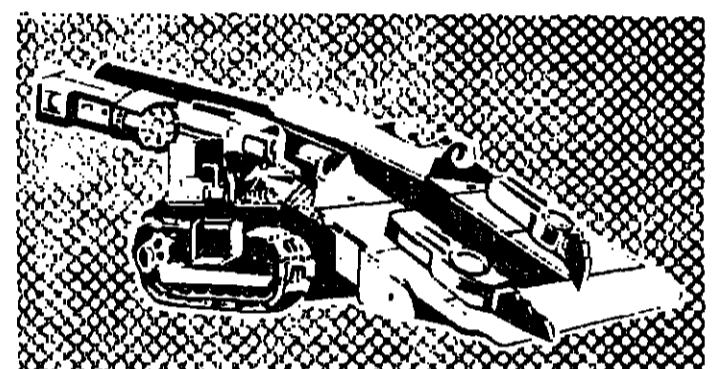
© Machingoexport, USSR, will buy from Mexico of Finland about 300 auxiliary buildings for gas pumping stations. Demag of West Germany will provide it with 20 telescopic self-propelled cranes.

To this country for skiing

Carlo Mauri, the Italian writer, journalist and traveller, is famous both in his country and abroad in connection with his trip on the legendary "Ro" together with Toot Heyerdahl and his journeys to the two poles, the Himalayas and along Equator.

Recently Intourist has placed again played host to Carlo Mauri. I've given up counting the number of countries that I have visited your country, he says. I travelled throughout Central Asia and the Caucasus, along the Volga River and Siberia. My

LOADING MACHINES			
for mining operations in various geologies			
PNEUMATICALLY DRIVEN CYCLIC-ACTION SINGLE-SCOOP LOADERS			
	PPN-1s	PPN-3	
Capacity, m ³ /hr	60	120	120
Loading area, mm	2300	2300	3200
Scoop, m ³	0.2	0.5	0.5
Max. lump size handled, mm	350	400	400
Treveling speed, m/min	58.3	75	75
Dimensions, mm			
length	2270	3200	3200
width	1320	1800	1800
height, maximum	2250	2800	2800
height, minimum	1500	1800	1800
Track gauge, mm	500,600	600,750	900
	750,900		
LOADERS WITH "GATHERING GRIPS"-TYPE WORKING MEMBER			
	IPNB-2	2PNB-2	PNB-3D
Capacity, m ³ /min	2	2.5	4
Rock hardness, kg/cm ²	600	1200	1800
Working width, mm	1600	1800	2500
SINKING OF GATHERING TIP BELOW			
Ground level, mm	250	380	380
Total power of electric motors, kW	31	65	134
Voltage, V	660/380	660/380	660/380
Frequency, Hz	500	500	500
Dimensions, mm			
length	50,60	50,60	50
width	7100	7800	9000
height, maximum	1600	1800	2700
height, minimum	2800	2980	2300
	1200	1300	1900
Mass, kg	6750	11840	26500



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GUIDELINES DRAWN

The second session of the Soviet-Indian subcommission for scientific and technological cooperation concluded in Delhi in a protocol envisaging expanded bilateral cooperation. It specifically calls for more cooperation in laser technology, electric metallurgy and metal alloys.

Such cooperation extends back many years, said M. G. K. Menon, Secretary of India's Department for Science and Technology.

Czechoslovak planes in Soviet skies

The LET aviation plant at Uherske Hradiste, Czechoslovakia, specializes in the production of L-410 passenger turboprop planes. They are reliable, have little maintenance problems, and are easily converted into ambulance, fire-fighting or transport planes. Basically this is the reason why the planes are in such large demand in the USSR.

Recently the USSR aided the plant in developing a new plane version needing only 400 metres for take-off and landing. Several dozens of such planes are already in regular service in the USSR.

Specialists trained with Soviet help are of singular importance to our science and technology. Thanks to Soviet assistance, he noted, India now contains the world's third largest contingent of researchers.

Intourist news

This winter with its abundant snow plus the vintage of Russian films—is something West Europeans can only dream of, he says with delight.

I've seen two attractions in the USSR: the Soviet airports, and second, "Intourist," which has made my trip skiing a real pleasure.